REMARKS

The Office Action dated May 17, 2005 has been received and carefully noted. The above amendments to the specification, and the following remarks, are submitted as a full and complete response thereto.

The specification has been amended to correct minor errors. No new matter has been added. Claims 1-34 are submitted for consideration.

Claims 1-34 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,268,828 to Martek. According to the Office Action, Martek teaches all of the elements of the presently pending claim except the use of allocation means which would have been obvious to one skilled in the art. The rejection is traversed as being based on a reference that neither teaches nor suggests the novel combination of features clearly recited in independent claims 1 and 24, and claims 2-23 and 25-34 dependent thereon.

Claim 1, upon which claims 2-23 depend, recites an antenna arrangement including at least two antennas for providing radio coverage to a plurality of user equipments in a predetermined area of a mobile communications network. The at least two different antennas being arranged to have different vertical properties to thereby provide different radio coverage in the predetermined area, and there being provided a plurality of frequencies for use in the predetermined area, the arrangement. The antenna arrangement also includes adjusting means for dynamically adjusting transmission properties of at least one of the antennas based on a distribution of users within a cell and

frequency requirements for users within the cell. The antenna arrangement further including allocating means for dynamically allocating at least one user equipment to at least one group based on link characteristics of a user equipment.

Claim 24, upon which claims 25-34 depend, recites a method of controlling an antenna arrangement including at least two antennas for providing radio coverage to a plurality of user equipment in a predetermined area of a mobile communications network. The method includes the steps of arranging at least two different antennas to have different vertical properties to thereby provide different radio coverage in a predetermined area and providing a plurality of frequencies for use in the predetermined area. The method also includes the steps of dynamically adjusting transmission properties of at least one of the antennas based on a distribution of users within a cell and frequency requirements for users within the cell and dynamically allocating each user equipment to at least one group based on link characteristics of a user equipment.

As will be discussed below, the cited prior art reference of Martek fails to disclose or suggest the elements of any of the presently pending claims.

Martek teaches that an antenna providing transmit, receive or both, is constructed as a series of antenna dipole columns mounted in close proximity to the outer surface of a nearby vertical conical shaped electrical ground surface. The ground surface is constructed circumferentially around a mast and the conical "slope" and is such that the ground surface faces downward at an angle, thereby creating on the ground a circumference within which the signal is propagated. Col. 4, lines 10-25, Col. 8, lines 7-

46. Martek, therefore, discloses that an antenna is formed around a downward facing cone, comprised of columns of individual antenna elements. These columns of elements can be driven in such a way (by controlling the relative phases of the signals in the element) so as to "beam-form" the beam produced by the overall antenna. The beam-forming can also be done to produce a down-tilted beam by shifting the phase of the lower elements in a column, relative to upper elements.

Applicant submits that Martek simply fails to teach or suggest each element of the presently pending claims. Claims 1, in part, recites an antenna arrangement including at least two antennas for providing radio coverage to a plurality of user equipments in a predetermined area of a mobile communications network, the at least two different antennas being arranged to have different vertical properties to thereby provide different radio coverage in the predetermined area. Claim 24, in part, recites of arranging at least two different antennas to have different vertical properties to thereby provide different radio coverage in a predetermined area. The Office Action alleges that Martek discloses "the at least two different antennas being arranged to have different vertical properties to thereby provide different radio coverage in the predetermined area" as recited in claims 1 and 24. Upon review of Martek, however, Applicant submits that Martek merely shows a single antenna arrangement. Claims 1 and 24, on the other hand, require at least a two antenna arrangement.

Specifically, Martek teaches a single antenna made up of a number of antenna elements. Each of the separate antenna element in Martek have identical vertical

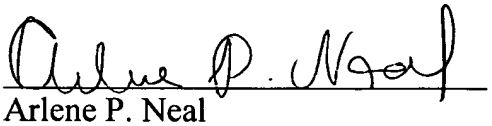
properties as they are identical elements that make up an overall array. Therefore, Applicant submits that each of the antenna elements, when taken individually, have the same properties. Furthermore, the individual antenna elements of Martek do not provide different radio coverage as recited in claims 1 and 24. As should be apparent to a person skilled in the art of phased array antennas, the upper and lower phase centers of the array, of Martek, are driven with different relative phases in order to down-tilt one overall beam from the array. More than one separate radio coverage area is thus **not** produced in Martek. Hence, Martek simply does not teach or suggest the at least two different antennas being arranged to have different vertical properties to thereby provide different radio coverage in the predetermined area" as recited in claims 1 and 24. Applicant respectfully asserts that the rejection under 35 U.S.C. §103(a) should be withdrawn because Martek simply fails to teach or suggest each feature of claims 1 and 24 and hence, dependent claims 2-23 and 25-34 thereon.

As noted previously, claims 1-34 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 1-34 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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